



6450-01-P

DEPARTMENT OF ENERGY

Amended Notice of Intent Modifying the Scope of the Environmental Impact Statement for the Hydrogen Energy California's Integrated Gasification Combined Cycle Project, Kern County, California

AGENCY: Department of Energy

ACTION: Amended Notice of Intent and Notice of Potential Floodplain and Wetlands Involvement.

SUMMARY: The U.S. Department of Energy (DOE or the Department) is publishing this Amended Notice of Intent to inform the public of changes in the scope of an ongoing environmental impact statement (EIS). In this EIS, DOE will assess the potential environmental impacts of a project proposed by Hydrogen Energy California, LLC, (HECA) pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality's NEPA regulations (40 CFR Parts 1500-1508), and DOE's NEPA regulations (10 CFR Part 1021). DOE's proposed action is to provide financial assistance for the construction and operation of HECA's project, which would produce and sell electricity, carbon dioxide and fertilizer. DOE selected this project for an award of financial assistance through a

competitive process under the Clean Coal Power Initiative (CCPI) program. This Amended Notice of Intent provides information about changes to the project's design, HECA's ownership, and DOE's plans for completing the NEPA process that occurred after publication of the original Notice of Intent (NOI) in the Federal Register on April 6, 2010 (75 FR 17397-401).

HECA's project would demonstrate integrated gasification combined cycle (IGCC) technology with carbon capture in a new electricity generating plant in Kern County, California. The plant would use a blend of 75 percent coal and 25 percent petroleum coke (petcoke) and would capture, sell and sequester carbon dioxide on a commercial scale. It would also produce and sell fertilizer and other nitrogenous compounds.

The project would gasify the coal and petcoke to produce synthesis gas (syngas), which would then be purified to produce a hydrogen-rich fuel for a combustion turbine that would generate electricity while minimizing emissions of sulfur dioxide, nitrogen oxides, mercury, and particulates compared to conventional coal-fired power plants. In addition, the project would achieve a carbon dioxide (CO₂) capture efficiency of approximately 90 percent at steady-state operation. The captured CO₂ would be compressed and transported via pipeline to the adjacent Elk Hills Oil Field (owned and operated by Occidental of Elk Hills, Inc. (OEHI)) for injection into deep underground oil reservoirs for enhanced oil recovery (EOR), resulting in geologic sequestration.

The EIS will inform DOE's decision on whether to provide financial assistance under its CCPI Program to HECA's project, which has an estimated capital cost of \$4 billion. DOE's financial assistance (or "cost share") would be limited to \$408 million, about 10 percent of the project's

total cost. DOE's financial assistance is also limited to certain aspects of the power and manufacturing plants, carbon capture, and sequestration. The EIS will evaluate the potential impacts of DOE's proposed action, the project proposed by HECA and any connected actions, and reasonable alternatives to DOE's proposed action. The purposes of this Amended Notice of Intent are to: (1) inform the public about DOE's proposed action and HECA's proposed project, including information on features of the project that have changed since publication of the first NOI; (2) describe how DOE intends to coordinate its NEPA review with the California Energy Commission's process for deciding whether to certify the project; (3) solicit comments for DOE's consideration regarding the scope and content of the EIS; (4) invite those agencies with jurisdiction by law or special expertise to be cooperating agencies in preparation of the EIS; and (5) provide notice that the proposed project may involve potential impacts to floodplains and wetlands.

DOE does not have regulatory jurisdiction over the HECA project. Its decisions are limited to whether and under what circumstances it would provide financial assistance to the project. There are a number of state and federal agencies that do have regulatory authority over the project; one of them is the California Energy Commission (CEC), which is responsible for power plant licensing under the Warren-Alquist Act (Cal. Pub. Res. Code § 25500 *et seq.*). This licensing process (referred to as "certification") is established by California law and will consider all relevant environmental aspects of HECA's proposed project. Under state law, the certification process fulfills the requirements of the California Environmental Quality Act (CEQA; Cal. Pub. Res. Code § 21000 *et seq.*). CEC will hold public meetings, issue a final staff assessment, conduct evidentiary hearings, and issue a decision based on the hearing record,

which will include the CEC's and other parties' assessments. The CEC conducts an independent analysis of the proposed project and prepares an assessment of its potential environmental impacts, potential conditions of certification (e.g. mitigation measures), and reasonable alternatives. The CEC also consults with interested Native American tribes and local, regional, state, and federal agencies, and will coordinate its environmental review with other agencies, including the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR). Pursuant to California law and a grant of primacy from the United States Environmental Protection Agency regarding Class II wells under section 1425 of the Safe Drinking Water Act, DOGGR has responsibility for permitting EOR injection and extraction wells and will separately permit the OEHI EOR project. DOGGR will coordinate with the CEC.¹

DOE intends to coordinate its NEPA review of the HECA project with the environmental review conducted by the CEC as lead agency under CEQA. DOE will work closely with the Commission throughout its regulatory processes in order to integrate the NEPA and CEQA processes in an efficient and expeditious manner. It is likely that DOE and the CEC will issue joint documents comprising DOE's NEPA analyses and CEC's environmental and other analyses conducted for its certification process.

¹ DOE anticipates that, pursuant to Cal. Pub. Res. Code § 21000 *et seq.*, California agencies will impose mitigation measures to address potential impacts and project design elements to verify the sequestration of CO₂ injected for EOR.

DATES: DOE and CEC will hold a joint meeting on July 12, 2012 at the Elk Hills Elementary School, 501 Kern Street, Tupman, CA 93276. For CEC, this meeting will constitute its Site Visit and Informational Hearing, which provide an opportunity for members of the community in the project vicinity to obtain information about the project, to offer comments, and to view the project site. Anyone may present oral comments at the Informational Hearing and no advance notice is needed. HECA LLC (referred to as the Applicant in the certification process) will explain its plans for developing the project and the related facilities and the CEC will explain the licensing process and its role in reviewing the amended Application for Certification. More information about the site visit, informational hearing and the CEC's certification process for this project can be found at http://www.energy.ca.gov/sitingcases/hydrogen_energy/index.html. The CEC docket number for this project is 08-AFC-08A.

For DOE, this joint meeting will constitute the public scoping meeting for DOE's NEPA review. The purpose of the scoping process is to establish the alternatives, potential environmental impacts, and other issues DOE should analyze in the EIS. Individuals, businesses, government agencies, and other entities may submit comments via letters, facsimiles, e-mails and telephone calls (see **ADDRESSES** below) to DOE regarding the alternatives, impacts and issues DOE should consider in its EIS. The public is also invited to attend the scoping meeting and present oral comments and suggestions on these topics. DOE will accept comments on the scope of the EIS until July 27, 2012; it will consider comments submitted after this date to the extent practicable. Additional information about DOE's NEPA review of this project can be found at <http://www.netl.doe.gov/publications/others/nepa/index.html>.

The CEC and DOE will provide more information about the joint meeting at a later date through their websites, mailings and public notices. The Site Visit will start at the Elk Hills Elementary School at 5:00 pm PDT; buses will take anyone wishing to visit the site from the school to the site and then return them to the school by 6:00 pm for the start of the Informational Hearing and Public Scoping Meeting. You need not participate in the site visit to participate in the hearing and scoping meeting. The hearing and meeting will start with presentations by the CEC's hearing officer, the Applicant, CEC staff, DOE, and others. A period for questions and comments will begin after these presentations.

ADDRESSES: Written comments on the scope of the EIS and requests to participate in the public scoping meeting should be addressed to: Mr. Fred Pozzuto, U.S. Department of Energy, National Energy Technology Laboratory, 3610 Collins Ferry Road, P.O. Box 880, Morgantown, WV 26507. Individuals who would like to provide oral or electronic comments should contact Mr. Pozzuto directly by telephone: 304-285-5219; toll-free number: 1-866-269-6493; fax: 412-386-6127; or electronic mail: heca.eis@netl.doe.gov.

FOR FURTHER INFORMATION CONTACT: For information about this project or to receive a copy of the draft EIS when it is issued, contact Mr. Pozzuto as described above. For general information on the DOE NEPA process, contact Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (GC-54), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585-0103; telephone: 202-586-4600; fax: 202-586-7031; or leave a toll-free message at 1-800-472-2756.

SUPPLEMENTARY INFORMATION:

Background

Since the early 1970s, DOE and its predecessor agencies have pursued research and development programs that include large, technically complex projects in pursuit of innovation in a wide variety of coal technologies through the proof-of-concept stage. However, helping a technology reach the proof-of-concept stage does not ensure its continued development or commercialization. Before a technology can be considered seriously for commercialization, it must be demonstrated at a sufficient scale to prove its reliability and economically competitive performance. The financial risk associated with such large-scale demonstration projects is often too high for the private sector to assume in the absence of strong incentives.

The CCPI program was established in 2002 as a government and private sector partnership to implement the recommendation in President Bush's National Energy Policy to increase investment in clean coal technology. Through cooperative agreements with its private sector partners, the program advances clean coal technologies to commercialization; these technologies often involve combustion improvements, control systems advances, gasifier design, pollution reduction (including greenhouse gas reduction), efficiency increases, fuel processing, and others.

The Congress established criteria for projects receiving financial assistance under this program in Title IV of the Energy Policy Act of 2005 (Pub. L.109-58) (EPACT 2005). Under this statute, CCPI projects must “advance efficiency, environmental performance, and cost competitiveness well beyond the level of technologies that are in commercial service” (Pub. L. 109-58, § 402(a)).

In February 2009, the American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5, 123 Stat. 115 (Feb. 17, 2009)) (ARRA) appropriated \$3.4 billion to DOE for “Fossil Energy Research and Development;” the Department intends to use a significant portion of these funds to provide financial assistance to CCPI projects.

The CCPI program selects projects for its government-private sector partnerships through an open and competitive process. Potential private sector partners may include developers of technologies, utilities and other energy producers, service corporations, research and development firms, software developers, academia and others. DOE issues funding opportunity announcements that specify the types of projects it is seeking, and invites submission of applications. Applications are reviewed according to the criteria specified in the funding opportunity announcement; these criteria include technical, financial, environmental, and other considerations. DOE selects the projects that demonstrate the most promise when evaluated against these criteria, and enters into a cooperative agreement with the applicant. These agreements set out the project’s objectives, the obligations of the parties, and other features of the partnership. Applicants must agree to provide at least 50 percent of their project’s cost; for most CCPI projects, the applicant’s cost share is much greater.

To date the CCPI program has conducted three rounds of solicitations and project selections. The first round sought projects that would demonstrate advanced technologies for power generation and improvements in plant efficiency, economics, and environmental performance. Round 2 requested applications for projects that would demonstrate improved mercury controls and gasification technology. Round 3, which DOE conducted in two phases, sought projects that

would demonstrate advanced coal-based electricity generating technologies which capture and sequester (or put to beneficial use) carbon dioxide emissions. DOE's overarching goal for Round 3 projects was to demonstrate technologies at commercial scale in a commercial setting that would: (1) operate at 90 percent capture efficiency for CO₂; (2) make progress towards capture and sequestration at less than a 10 percent increase in the cost of electricity for gasification systems and a less than 35 percent increase for combustion and oxycombustion systems; and (3) make progress toward capture and sequestration of 50 percent of the facility's CO₂ output at a scale sufficient to evaluate the full impacts of carbon capture technology on a generating plant's operations, economics and performance. The HECA project was one of two selected in the first phase of Round 3. DOE entered into a cooperative agreement with HECA on September 30, 2009, and began the NEPA process. HECA continued to seek the regulatory authorizations needed for the project, including certification by the CEC and environmental permits from federal, state and other agencies.

On September 2, 2011, SCS Energy California LLC (SCS Energy) acquired HECA from BP Alternative Energy North America Inc., and Rio Tinto Hydrogen Energy LLC. Because SCS Energy intended to make several modifications to the project – including the addition of fertilizer production capabilities – the NEPA and regulatory processes were suspended until HECA submitted an Amended Application for Certification (AFC) to the CEC on May 2, 2012.

Purpose and Need for DOE Action

The purpose and need for DOE action – providing limited financial assistance to HECA's project – remain the same after the change in HECA's ownership: to advance DOE's CCPI program by

funding projects that have the best chance of achieving the program's objective as established by the Congress. The objective of the CCPI program is the commercialization of clean coal technologies that improve efficiency, environmental performance, and cost competitiveness well beyond those of technologies that are currently in commercial service.

Site of the Project Proposed by HECA

The location of the project remains the same with only minor changes in the size of the project site. HECA would construct its electricity and fertilizer production facility on a site currently used for agriculture in Kern County, California. The 1,106 acre site (453 acres of which would be used for the project and 653 acres for a controlled buffer area) is in south-central California near the unincorporated community of Tupman, approximately 7 miles west of the city of Bakersfield. The site's topography is characterized by relatively flat, low-lying terrain that slopes very gently from southeast to northwest. The site and surrounding areas are used for agricultural purposes, including cultivation of cotton, alfalfa, and onions.

HECA modified the project's design to better meet market demands. This new design resulted in changes to the project's plot plan and footprint within the site (including the addition of the fertilizer manufacturing plant and the possible addition of a rail loop), but as mentioned above, the size of the site and buffer areas remain nearly unchanged. Unless otherwise noted below, the design is not appreciably different from that set out in the previous NOI and regulatory filings. The basic components and attributes of the project that remain unchanged include:

- the use of IGCC technology, the basic components of which are feedstock delivery, handling, and storage; gasification unit; sour gas shift, low temperature gas cooling,

and mercury removal units; acid gas removal unit; sulfur recovery and tail gas compression; CO₂ compression; and combined cycle power block equipment;

- the project's location;
- capture of 90 percent of the CO₂ generated by the facility;
- transportation of the CO₂ to the Elk Hills Oil Field for use in EOR and resulting sequestration;
- advanced air emissions controls;
- use of brackish water (supplied by the Buena Vista Water Storage District); and
- zero liquid discharge.

There are some modifications to the project:

- The project will include an integrated manufacturing plant producing approximately 1 million tons per year of nitrogenous compounds such as urea, urea ammonium nitrate (UAN) and anhydrous ammonia to be used in agricultural, transportation and industrial applications.
- A single Mitsubishi Heavy Industries' (MHI) oxygen-blown dry feed gasifier and an MHI 501 GAC[®] combustion turbine will be used. The original project planned to use three gasifiers from a different manufacturer.
- While most of the captured CO₂ (about 87 percent of the amount captured) would continue to be used for EOR at the nearby Elk Hills Oil Field, about 13 percent of the captured CO₂ would be beneficially used to produce urea. The project would provide approximately 3 million tons per year for EOR, rather than the approximately 2 million tons anticipated under the previous design as a result of the change in the gasifier the project now intends to use. The resulting increase in hydrogen production accounts for

the additional 1 million tons of CO₂ per year when the project was originally envisioned.

- The facility would use a blend of 75 percent coal and 25 percent petcoke as fuel throughout the life of the facility (previously, HECA planned to use this fuel blend only during the demonstration phase of operation).
- Natural gas would be used for start-up, shut down and equipment outages only, not for routine operation of the turbine as originally planned. A natural gas interconnection would be made to an existing PG&E pipeline approximately 13 miles north of the site, rather than the eight miles originally estimated.
- Potable water would be delivered to the project site from a new West Kern Water District facility located less than one mile away via a new water pipeline, rather than the 7 miles originally anticipated.
- An approximately 2-mile electrical transmission line, rather than the 8-mile line originally anticipated, would connect with a future PG&E switching station east of the project site.
- HECA is considering two alternatives for coal transportation to the site: alternative 1 would involve a new approximately 5-mile railroad spur that would connect the site to the existing San Joaquin Railroad Buttonwillow line; alternative 2 would involve the previously proposed truck transport of the coal from an existing transloading facility.

Proposed Generating Plant

The HECA project would demonstrate IGCC and carbon capture technology on a commercial scale in a new power plant consisting of a single gasifier with gas cleanup systems, a gas combustion turbine, a heat recovery steam generator, a steam turbine, and associated facilities.

The plant proposed by HECA would gasify coal and petcoke to produce syngas, which would then be processed and purified to produce a hydrogen-rich fuel. The hydrogen would be used to drive the gas combustion turbine. Hot exhaust gas from the gas combustion turbine would generate steam from water in the heat recovery steam generator to drive the steam turbine; both turbines would generate electricity. At full capacity, the plant is expected to use about 4,580 short tons of coal and about 1,140 short tons of petcoke per day (about 162 million short tons and 400,000 short tons per year, respectively).

Combined, the gas combustion and steam turbines would have the capacity to generate 405 MW gross (approximately 300 MW nominal) of low-carbon electricity, slightly more than the 390 MW gross and 288 MW net originally anticipated. This combined-cycle approach of using gas and steam turbines in tandem increases the amount of electricity that can be generated from the feedstock.

The plant would include a system capable of capturing about 90 percent of the CO₂ generated during steady-state operation. Most of the captured CO₂ would be used for EOR at the Elk Hills Field, located approximately three miles southwest of the project's location. This use of captured CO₂ would result in the sequestration of more than 3 million tons per year. Some of the captured CO₂ would be beneficially used to manufacture urea rather than for EOR.

The proposed plant would minimize sulfur dioxide, nitrogen oxides, mercury, and particulate emissions as compared to conventional coal-fired power plants. The project would incorporate state-of-the-art emissions controls that reflect or exceed Best Available Control Technology to reduce air emissions. The actual removals are expected to be similar to those stated in the original NOI.

Solids generated by the gasifier would be accumulated onsite and made available for appropriate recycling or beneficial use, and if these options are not available, disposed of in accordance with applicable laws. Unlike the gasifiers that HECA originally planned to use, the MHI gasifier does not produce solids with fuel value, and therefore solids would not be returned to the gasification process as HECA had originally planned.

In addition to the gasifier and turbines, the power plant's equipment would include stacks, a mechanical-draft cooling tower, syngas cleanup facilities, and particulate filtration systems. The height of the tallest proposed structure would be approximately 305 feet above ground rather than 260 feet as originally proposed. The plant would also require systems for feedstock handling and storage, as well as on-site roads, administration buildings, water and wastewater treatment systems, and management facilities for handling gasification solids.

Proposed Fertilizer Production Facilities

A portion of the clean hydrogen-rich fuel would be used as a feedstock for the ammonia synthesis unit, which would have a capacity of 2,000 short tons per day. The ammonia is used as

an intermediate for the production of urea. The project is designed so that it can sell urea, ammonia, and perhaps other nitrogenous compounds.

The project's urea production unit would use pastillation technology, which converts urea melt into high quality urea pastilles (small solid pellets of urea). The unit would have a capacity of about 1,700 short tons per day. The urea, along with other intermediates produced by the plant, could also be used by the urea ammonia nitrate unit to produce 1,500 short tons per day of UAN.

Proposed Linear Facilities

Linear facilities are the pipelines, electrical lines and rail lines used to transport materials and power to and from the plant. The source of process water for the plant would be brackish groundwater supplied by the Buena Vista Water Storage District; approximately 4,600 gallons per minute (average annual basis) would be required for cooling water makeup, steam cycle makeup, and other processes. The process water pipeline would be approximately 15 miles in length. Potable water for drinking and sanitary use would be supplied by the West Kern Water District. The potable water line would be approximately 1 mile in length. The project would recycle water and would incorporate zero liquid discharge (ZLD) technology for process and other wastewater from plant operations. Therefore, there would be no industrial wastewater discharge. Sanitary wastewater would be disposed of in an onsite leach field (e.g., a septic system) in accordance with applicable law.

HECA would connect to the PG&E Midway Substation via a 230 kV Midway-Wheeler Ridge transmission line and a new PG&E switching station. A 230 kV, single pole, double circuit

capacity transmission line would be built to provide transmission service for the plant's electricity output. The line would be approximately 2 miles in length.

An approximately 13-mile natural gas supply pipeline would connect with an existing PG&E pipeline north of the project site, and an approximately 3-mile CO₂ pipeline extending from the site to the Elk Hills Oil Field would be used to transport the CO₂ for use in EOR and resulting geologic sequestration. HECA has proposed two alternatives for coal transportation to the site: alternative 1 would involve an approximately 5-mile new industrial railroad spur that would connect the site to the existing San Joaquin Railroad Buttonwillow line; alternative 2 would involve the previously proposed 27-mile route for truck transport of the coal from an existing transloading facility.

Proposed Use of CO₂ for EOR and Sequestration

The project would result in the sequestration of about three million tons of CO₂ per year, rather than the two million tons originally proposed, during the demonstration phase that would be funded in part by DOE. HECA anticipates this rate of sequestration would continue for the operational life of the power plant. The captured CO₂ would be compressed and transported via pipeline to the Elk Hills Oil Field approximately 3 miles from the power plant. The CO₂ would enhance domestic oil production, contributing to the nation's energy security. An additional small amount of the CO₂ produced by the facility would be used to manufacture urea.

The EOR process involves the injection and reinjection of CO₂ to reduce the viscosity and enhance other properties of trapped oil in order to facilitate its flow through the reservoir,

improving extraction. During EOR operations, the pore space left by the extracted oil is occupied by the injected CO₂, sequestering it in the geologic formation. EOR operations would be monitored to ensure the injected CO₂ remains in the formation.

Proposed Project Schedule

The project proposed by HECA includes engineering and design, permitting of the plant and associated facilities, equipment procurement, construction, startup, operations, and demonstration of the IGCC technology and CO₂ sequestration through use in EOR operations. HECA anticipates that it would take about four years to construct, commission, and commence operation of the plant. It plans to start construction by June 2013 and commence commercial operation by September 2017. This schedule is contingent upon HECA receiving the necessary regulatory authorizations (which would be preceded by the hearings and other events mandated by the regulatory agencies' procedures) and upon DOE deciding to provide financial assistance for the construction and demonstration phases of the project (a decision that would occur after completion of the EIS).

Connected and Cumulative Actions

Under the cooperative agreement between DOE and HECA, DOE would share the costs of the gasifier, syngas cleanup systems, combustion turbine, steam generator, steam turbine, fertilizer production facilities, supporting facilities and infrastructure, and a demonstration phase in which the project would use captured CO₂ for EOR.² Under this agreement, DOE would not share in

² Because of the requirements of California law, DOE expects that the HECA project would continue sequestering CO₂ throughout the operational life of the plant.

the cost of the air separation unit, CO₂ EOR and sequestration facilities, or certain other facilities. Accordingly, the EIS will evaluate the potential impacts of these aspects of HECA's project as connected actions.

DOE will also analyze the cumulative impacts of both the proposed project and any connected actions. The cumulative impacts analysis will include analysis of greenhouse gas emissions and global warming, other air emissions, and other incremental impacts that, when added to past, present, and reasonably foreseeable impacts, may have significant effects on the human environment.

Alternatives

NEPA requires that an EIS evaluate the range of reasonable alternatives to an agency's proposed action. The range of reasonable alternatives encompasses those alternatives that would satisfy the underlying purpose and need for agency action. The purpose and need for DOE action – providing limited financial assistance to the HECA IGCC project – are to advance the CCPI program by selecting projects that have the best chance of achieving the program's objective as established by the Congress: the commercialization of clean coal technologies that advance efficiency, environmental performance, and cost competitiveness well beyond the level of technologies that are currently in service. DOE's purpose and need, as well as the range of reasonable alternatives, will differ from those of the CEC.

DOE's NEPA regulations include a process for identifying and analyzing reasonable alternatives in the context of providing financial assistance through a competitive selection of projects

proposed by entities outside the federal government. The range of reasonable alternatives in competitions for grants, loans and other financial support is defined in large part by the range of responsive proposals DOE receives. Unlike projects undertaken by DOE itself, the Department cannot mandate what outside entities propose, where they propose to do it, or how they propose to do it beyond establishing requirements in the funding opportunity announcement that further the program's objectives. DOE's decision is limited to selecting among the applications submitted by project sponsors that meet CCPI's goals.

Recognizing that the range of reasonable alternatives in the context of financial assistance and contracting is in large part determined by the number and nature of the proposals submitted, section 216 of DOE's NEPA regulations requires the Department to prepare an "environmental critique" that assesses the environmental impacts and issues relating to each of the proposals that the DOE selecting official considers for an award. *See* 10 C.F.R. § 1021.216. This official considers these impacts and issues, along with other aspects of the proposals (such as technical merit and financial ability) and the program's objectives, in making awards. DOE prepared a critique of the proposals that were deemed suitable for selection in this round of awards for the CCPI program.

Once DOE selects a project for an award, the range of reasonable alternatives becomes the project as proposed by the applicant, any alternatives still under consideration by the applicant or that are reasonable within the confines of the project as proposed (e.g., the particular location of the generating plant on the 1,106-acre site or the rights-of-way (ROWs) for linear facilities), and a no action alternative. Regarding the no action alternative, DOE assumes for purposes of the

EIS that, if it were to decide to withhold financial assistance from the project, the project would not proceed. DOE currently plans to analyze the project as proposed by HECA (with and without any mitigating conditions that DOE or the CEC may identify as reasonable and appropriate); alternatives to HECA's proposal that it is still considering (e.g., the ROWs for linear facilities); and the no action alternative.

As noted above, DOE will analyze any "project-specific" alternatives that HECA is still considering such as the coal delivery alternatives, and other reasonable alternatives that may be suggested during the scoping period. HECA is no longer considering other project-specific alternatives identified in the original NOI (i.e., the location of the facility within the site boundaries, alternative routes for the process water supply pipeline, CO₂ pipeline and transmission line).

Under the no action alternative, DOE would not provide funding to HECA. In the absence of financial assistance from DOE, HECA could reasonably pursue two options. It could build the project without DOE funding; the impacts of this option would be essentially the same as those of DOE's proposed action. Or, HECA could choose not to pursue its project, and there would be no impacts from the project. This option would not contribute to the goal of the CCPI program, which is to accelerate commercial deployment of advanced coal technologies that provide the United States with clean, reliable, and affordable energy. However, as required by NEPA, DOE analyzes this option as the no action alternative in order to have a meaningful comparison between the impacts of DOE providing financial assistance and withholding that assistance.

Alternatives considered by HECA in developing its proposed project will be discussed in the EIS. Differences between DOE's range of reasonable alternatives and those considered by the CEC will also be delineated. HECA analyzed several alternative sites and determined that the only reasonable site alternative was its proposed site based on, among other things, the presence or absence of sensitive resources; the availability of land; and the site's proximity to the brackish groundwater supply, to electric transmission and natural gas facilities, and to a CO2 storage reservoir.³ The EIS will describe HECA's site selection process. However, DOE does not plan to analyze in detail the alternatives sites considered by HECA because HECA is no longer considering these sites, they were not part of HECA's proposal, and therefore they are no longer reasonable alternatives.

Floodplains and Wetlands

The footprint of the proposed IGCC and manufacturing facility and carbon capture facility would not affect any wetlands or floodplains. Wetland and floodplain impacts, if any, from the construction of pipelines would be avoided by the use of horizontal directional drilling. In the event that the EIS identifies that wetlands or floodplains on the surface would be affected by the project (including its linear facilities) or connected actions, DOE will prepare a floodplain and wetland assessment in accordance with its regulations at 10 CFR Part 1022 and include the assessment in the EIS.

Preliminary Identification of Environmental Issues

³ HECA initially selected another site; it subsequently decided to move the project when it discovered the existence of sensitive biological resources at the initial site.

The original NOI contained a preliminary list and description of potential environmental issues (75 FR 17397-401); the list of issues would remain the same for the project as modified after SCS Energy's acquisition of HECA. The list includes those impacts and resource areas typically addressed in an EIS for a project of this type: atmospheric resources; water resources; infrastructure and land use; solid waste; visual resources; floodplains and wetlands; ecological resources; safety and health; construction-related impacts; community impacts; cultural and archaeological resources; threatened and endangered species;⁴ and cumulative effects. Currently, no threatened or endangered species have been identified at the proposed plant site; three listed plant species and nine listed wildlife species (rather than the eight as stated in the original NOI) have the potential to occur in the ROWs of the linear facilities.

Additions to or deletions from the list may occur as a result of this scoping process. The level of analysis of issues in the EIS will be in accordance with their level of importance. The most detailed analyses are likely to focus on potential impacts to air, water, and ecological resources.

Issued in Pittsburgh, PA, this 12__ day of June 2012.

Anthony V. Cugini
Director
National Energy Technology Laboratory

⁴ No threatened or endangered species have been identified at the proposed plant site; three listed plant species and nine listed wildlife species (rather than the eight as stated in the original NOI) have the potential to occur in the ROWs of the linear facilities.

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